

# HALLIBURTON

iCem<sup>®</sup> Service

## EXTRACTION OIL & GAS

Date: Monday, August 01, 2016

### **Breniman #8**

Production

Job Date: Wednesday, July 27, 2016

Sincerely,

**Lauren Roberts**

## Legal Notice

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Table of Contents

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1.0    Cementing Job Summary ..... 4

      1.1    Executive Summary .....4

2.0    Real-Time Job Summary ..... 7

      2.1    Job Event Log .....7

## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **Breniman #8** cement **Production** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

**12 bbl. of cement returned to surface.**

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

**Halliburton [Ft. Lupton]**

*The Road to Excellence Starts with Safety*

Sold To #: 369404		Ship To #: 3615637		Quote #:		Sales Order #: 0903443508				
Customer: EXTRACTION OIL & GAS				Customer Rep:						
Well Name: BRENNIMAN			Well #: 8		API/UWI #: 05-123-40421-00					
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO				
Legal Description:										
Contractor:				Rig/Platform Name/Num: PATTERSON 346 / 720-402-6217						
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB89685				Srv Supervisor: AARON SMITH						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		17220ft		Job Depth TVD						
Water Depth				Wk Ht Above Floor						
Perforation Depth (MD)		From		To						
Well Data										
Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Open Hole Section			13.5				0	17220		
Casing		9.625	8.921	36			0	17220		
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625			17220		Top Plug	9.625		HES	
Float Shoe	9.625					Bottom Plug	9.625		HES	
Float Collar	9.625					SSR plug set	9.625		HES	
Insert Float	9.625					Plug Container	9.625		HES	
Stage Tool	9.625					Centralizers	9.625		HES	
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1		11.5 lb/gal Tuned Spacer III	50	bbl	11.5	3.74				
149.34 lbm/bbl	Barite Pre-Mix Dry	149.34 lbm/bbl	Barite Pre-Mix Dry	149.34 lbm/bbl	Barite Pre-Mix Dry	149.34 lbm/bbl	Barite Pre-Mix Dry	149.34 lbm/bbl	Barite Pre-Mix Dry	

0.30 gal/bbl	Musol A, 330 gal. tote Mix-On-Fly to Slurry	0.30 gal/bbl	Musol A, 330 gal. tote Mix-On-Fly to Slurry	0.30 gal/bbl	Musol A, 330 gal. tote Mix-On-Fly to Slurry	0.30 gal/bbl	Musol A, 330 gal. tote Mix-On-Fly to Slurry	0.30 gal/bbl	Musol A, 330 gal. tote Mix-On-Fly to Slurry
0.30 gal/bbl	Dual Spacer Surfactant B Mix-On-Fly to Slurry	0.30 gal/bbl	Dual Spacer Surfactant B Mix-On-Fly to Slurry	0.30 gal/bbl	Dual Spacer Surfactant B Mix-On-Fly to Slurry	0.30 gal/bbl	Dual Spacer Surfactant B Mix-On-Fly to Slurry	0.30 gal/bbl	Dual Spacer Surfactant B Mix-On-Fly to Slurry

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	Type I/II Cement	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		8	7.48
	.90%	HR-5 Pre-Mix Dry							
	7.48 gal	FRESH WATER Mix-On-Fly to Slurry							
	iFacts Test id#	2330238							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	ElastiCem	ElastiCem W/ Super CBL	1900	sk	13.2	1.57		8	7.49

Cement Left In Pipe	Amount	42 ft	Reason	Shoe Joint
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Comment
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## 2.0 Real-Time Job Summary

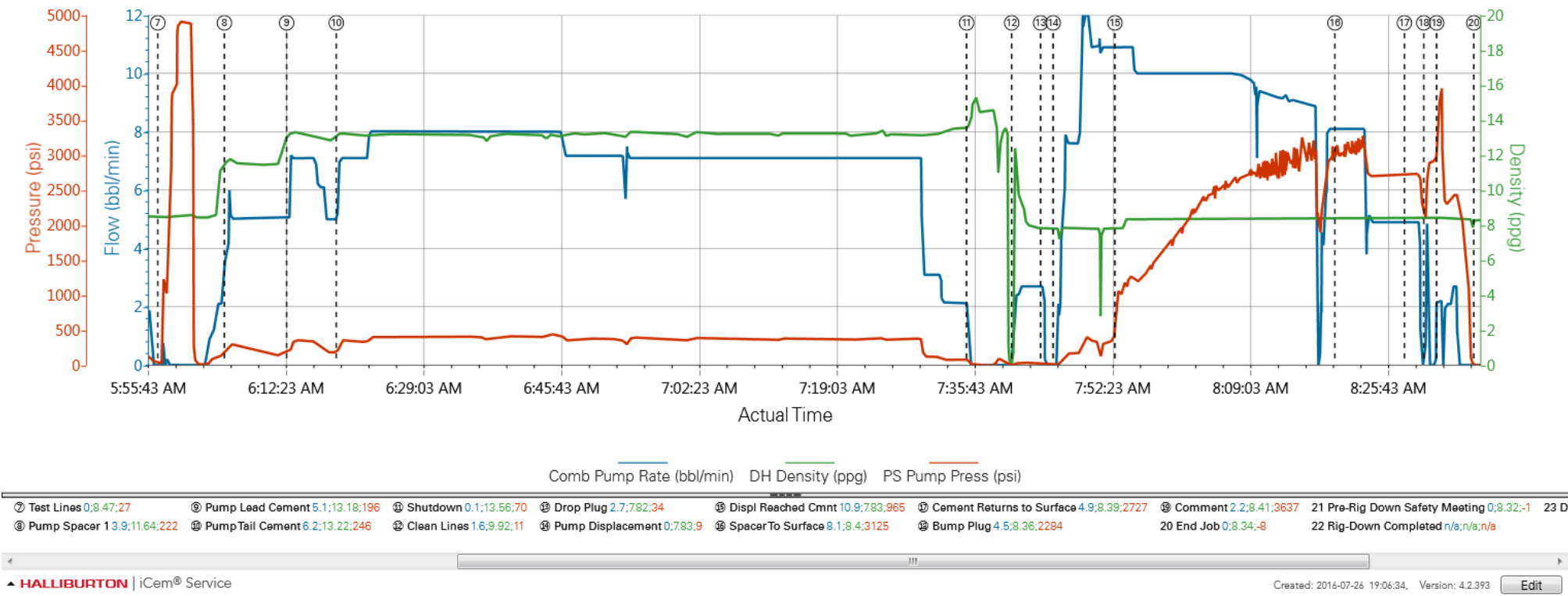
### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Combined Pump Rate (bbl/min)	Downhole Density (ppg)	Pass-Side Pump Pressure (psi)	Comments
Event	1	Call Out	Call Out	7/26/2016	18:00:00	USER				For on location @2330
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	7/26/2016	22:00:00	USER				Journey management meeting held prior to departure, Journey called into dispatch
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	7/26/2016	23:10:00	USER				With all equipment and materials. Rig still running casing, hazard hunt and water test performed.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/26/2016	23:20:00	USER				JSA to discuss the hazards of rig-up
Event	5	Rig-Up Completed	Rig-Up Completed	7/27/2016	00:20:00	USER				With-out incident
Event	6	Start Job	Start Job	7/27/2016	05:54:07	COM6	0.00	0.00	6.00	With water supplied from upright tanks water tested good to mix cement, Ph7 Cl 74 ppm, Temp 71
Event	7	Test Lines	Test Lines	7/27/2016	05:57:09	COM6	0.00	8.47	27.00	@5000 psi
Event	8	Pump Spacer 1	Pump Spacer 1	7/27/2016	06:05:13	COM6	3.90	11.64	222.00	50 bbls tuned spacer @ 11.5 ppg, Verified with scales.
Event	9	Pump Lead Cement	Pump Lead Cement	7/27/2016	06:12:44	COM6	5.10	13.18	196.00	150 sks (41.94 Bbls) ElastiCem W/O super cbl @ 13.2 ppg.. verified with scales.
Event	10	Pump Tail Cement	Pump Tail Cement	7/27/2016	06:18:44	COM6	6.20	13.22	246.00	1900 sks (531.27 bbls) ElastiCem @ 13.2 ppg, verified with scales.
Event	11	Shutdown	Shutdown	7/27/2016	07:34:59	USER	0.10	13.56	70.00	To blow lines down, and drop KLX plug
Event	12	Clean Lines	Clean Lines	7/27/2016	07:40:26	USER	1.60	9.92	11.00	Wash pumps and lines to 4 sided tank
Event	13	Drop Plug	Drop Plug	7/27/2016	07:43:56	USER	2.70	7.82	34.00	KLX hand dropped plug after removing cap on HES plug container.
Event	14	Pump Displacement	Pump Displacement	7/27/2016	07:45:27	COM6	0.00	7.83	9.00	382 bbls fresh water
Event	15	Displ Reached Cmnt	Displ Reached Cmnt	7/27/2016	07:52:55	COM6	10.90	7.83	965.00	@60 bbls displacement.
Event	16	Other	Spacer To Surface	7/27/2016	08:19:32	COM6	8.10	8.40	3125.00	@325 bbls displacement, 50 bbls to surface.

Event	17	Cement Returns to Surface	Cement Returns to Surface	7/27/2016	08:27:56	USER	4.90	8.39	2727.00	@ 375 bbls displacement, 12 bbls to surface after pumping 5 bbl wet shoe
Event	18	Bump Plug	Bump Plug	7/27/2016	08:30:17	USER	4.50	8.36	2284.00	Final Circulating pressure 2749 psi,
Event	19	Comment	Comment	7/27/2016	08:31:50	USER	2.20	8.41	3637.00	Rupture disc burst @ 3945, 5 bbls wet shoe pumped
Event	20	End Job	End Job	7/27/2016	08:36:20	USER	0.00	8.34	-8.00	Thanks Aaron Smith and Crew
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/27/2016	08:38:00	USER	0.00	8.32	-1.00	JSA to discuss the hazards of rig-down
Event	22	Rig-Down Completed	Rig-Down Completed	7/27/2016	09:25:00	USER				With no incidents or injuries.
Event	23	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	7/27/2016	09:30:00	USER				Journey management meeting held prior to departure, Journey called into dispatch



Custom Results



Custom Results

